APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/266,680	03/11/1999	JEFF YOUNG	07844/292001	6131

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EXAMINER
BASHORE, WILLIAM L

ART UNIT	PAPER NUMBER
2176	

DATE MAILED: 02/24/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.		Applicant(s)	
Office Action Summary	09/266,680		YOUNG ET AL.	
	Examiner		Art Unit	
	William L. Bashore		2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _05 December 2003_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _14-18, 20-30 and 32-40_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _14-18, 20-30 and 32-40_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 16

DETAILED ACTION

1.   This action is responsive to communication: amendment filed 12/5/2003, to the original application filed

3/11/1999. IDS filed 12/3/2001 (paper 2), and 4/11/2002 (paper 3).

2.   Claims 14-36 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Motoyama, and

Takasawa.

3.   Claims 14-18, 20-30, 32-40 are pending. Claims 14, 22, 25, 28, 34 are independent claims.

Claim Rejections - 35 USC § 103

4.   **The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness**

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102
> of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the
> art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was
> made.

5.   **Claims 14-18, 20-30, 32-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over**

Motoyama et al. (hereinafter Motoyama), U.S. Patent No. 6,009,436 issued December 28, 1999, in view of

Takasawa et al. (hereinafter Takasawa), UK Patent Application, GB 2 307 571 A, publication date May

28, 1997.

    In regard to independent claim 14, Motoyama teaches:

    - converting a format of a first source document (SGML) into a format of another similarly structured

document (HTML). Motoyama teaches mapping from SGML to HTML utilizing mapping tables of Appendices

A-D, said mapping utilizing various heuristics in order to perform said mapping (Motoyama Appendix A-D,

Abstract, column 3 lines 27-29, column 6 lines 30-32; compare with claim 14 *"A method of converting....the method comprising:"*).

- Motoyama does not specifically teach identifying patterns common within documents. However, Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample documents (Takasawa page 9, near bottom). Takasawa parses documents, and compares various elements to elements and attributes in said structure list (i.e. appearance frequency), resulting in a listed pattern of structured elements in the documents, precipitating generation of a DTD based upon said list (Takasawa page 9 near bottom, to page 10 at top, also pages 11-12, and page 16 at bottom, Figures 8-11; compare with claim 14 *"identifying patterns common to the first and second source documents;"*, *"using the identified common patterns"*, and *"based on the identified common patterns"*). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa's pattern identification to Motoyama, providing Motoyama the benefit of simplifying the exchange of similar documents for reuse, by taking into account common patterns in the mapping process (Takasawa page 1 at middle).

- mapping elements and sub-elements from one source document to equivalent elements and sub-elements in the second document, the mapping of SGML elements to HTML elements are used by Motoyama to produce documents accordingly (Motoyama column 6 lines 1-10, Apendix B, D, Figures 1A – 1D, 3A- 3B; compare with claim 14 *"map elements and sub-elements....in the second source document,"*).

Motoyama teaches mapping elements in a first document, to another element in a second document (Motoyama column 6 lines 29-38, Figures 1A – 1D). It is noted that Motoyama teaches an SGML document with its corresponding DTD (Figure 1C and 1A, respectively). A mapping is created (Figure 1B), resulting in conversion to an equivalent HTML document (Figure 1D). Motoyama's conversion entails an SGML document start tag specifically mapped to its (differently named) HTML equivalent (Motoyama column 8 lines 14-18, 40-42, SGML tag <t> maps to HTML tag <html>, etc.) (see also Motoyama column 7 lines 5-11; compare with claim 14 *"...including mapping a first element in the first source document to a second element in the second source document"*, and *"the first element and the second element having different element names."*).

In regard to dependent claim 15, Motoyama teaches mappings within Appendices A-D, said appendices comprising various tag replacement (Motoyama column 29 line 45, to column 31 line 48; compare with claim 15).

In regard to dependent claim 16, Motoyama teaches transformation of an SGML document into an HTML document, said transformation incorporating analyzation of their respective DTDs, and utilizing the mappings of Appendices A-D (Motoyama Abstract, column 6 lines 1-4, 30-32, Appendices A-D, Figures 3A-3B; compare with claim 16).

In regard to dependent claim 17, Motoyama does not specifically teach creating a DTD if one does not exist in the first document. However, Takasawa teaches a DTD created from analyzation of structured information from a sample document (Takasawa page 4 at middle; compare with claim 17). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa's DTD creation to Motoyama, providing Motoyama the flexibility of creating an initial DTD if needed.

In regard to dependent claim 18, claim 18 is rejected using the same rejection and rationale as set forth by the Examiner in the current rejection of claim 14.

In regard to dependent claim 20, claim 20 is rejected using the same rejection and rationale as set forth by the Examiner in the current rejection of claims 19.

In regard to dependent claim 21, claim 21 incorporates substantially similar subject matter as claimed in claim 14, and in further view of the following, is rejected along the same rationale.

Motoyama teaches that processing systems are known in which a processor converts a markup language document automatically into another format (Motoyama column 2 lines 42-45; compare with claim 21), therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to automate Motoyama's invention to benefit from the advantages that automation provides (i.e. freeing up human resources).

In regard to independent claim 22, Motoyama teaches:

- converting a format of a first source document (SGML) into a format of another similarly structured document (HTML). Motoyama teaches mapping from SGML to HTML utilizing mapping tables of Appendices A-D, said mapping utilizing various heuristics in order to perform said mapping (Motoyama Appendix A-D, Abstract, column 3 lines 27-29, column 6 lines 30-32; compare with claim 22 *"A method of converting.....the method comprising:"*).

- Motoyama does not specifically teach identifying patterns common within documents. However, Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample documents (Takasawa page 9, near bottom). Takasawa parses documents, and compares various elements to elements and attributes in said structure list (i.e. appearance frequency), resulting in a listed pattern of structured elements in the documents, precipitating generation of a DTD based upon said list (Takasawa page 9 near bottom, to page 10 at top, also pages 11-12, and page 16 at bottom, Figures 8-11; compare with claim 22 *"identifying patterns common to the source document and the set of source documents;"*, *"the common pattern"*, and *".....based upon the identified common patterns... "*). It would have been obvious to on of ordinary skill in the art at the time of the invention to apply Takasawa's pattern identification to Motoyama, providing Motoyama the benefit of simplifying the exchange of similar documents for reuse, by taking into account common patterns in the mapping process (Takasawa page 1 at middle).

- mapping elements and sub-elements from one source document to equivalent elements and sub-elements in the second document, the mapping of SGML elements to HTML elements are used by Motoyama to

produce documents accordingly (Motoyama column 6 lines 1-10, Apendix B, D, Figures 3A- 3B; compare with claim 22 *"mapping elements and sub-elements.....in the set of source documents."*, and *"in the common pattern of the source document"*, and *"in common pattern of the set of source documents"*).

- Motoyama teaches mappings within Appendices A-D, said appendices comprising various tag replacement (Motoyama column 29 line 45, to column 31 line 48; compare with claim 22 *"replacing tag names"*).

- Motoyama teaches mapping elements in a first document, to another element in a second document (Motoyama column 6 lines 29-38, Figures 1A – 1D). It is noted that Motoyama teaches an SGML document with its corresponding DTD (Figure 1C and 1A, respectively). A mapping is created (Figure 1B), resulting in conversion to an equivalent HTML document (Figure 1D). Motoyama's conversion entails an SGML document start tag specifically mapped to its (differently named) HTML equivalent (Motoyama column 8 lines 14-18, 40-42, SGML tag <t> maps to HTML tag <html>, etc.) (see also Motoyama column 7 lines 5-11; compare with claim 22 *"...including mapping a first element in the first source document to a second element in the second source document"*, and *"the first element and the second element having different element names."*).

In regard to dependent claim 23, Motoyama teaches transformation of an SGML document into an HTML document, said transformation incorporating analyzation of their respective DTDs, and utilizing the mappings of Appendices A-D (Motoyama Abstract, column 6 lines 1-4, 30-32, Appendices A-D, Figures 3A-3B; compare with claim 23).

In regard to dependent claim 24, Motoyama does not specifically teach creating a DTD if one does not exist in the first document. However, Takasawa teaches a DTD created from analyzation of structured information from a sample document (Takasawa page 4 at middle; compare with claim 24). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa's DTD creation to Motoyama, providing Motoyama the flexibility of creating an initial DTD if needed.

In regard to independent claim 25, Motoyama teaches:

- converting a format of a first source document (SGML) into a format of another similarly structured

document (HTML). Motoyama teaches mapping from SGML to HTML utilizing mapping tables of Appendices

A-D, said mapping utilizing various heuristics in order to perform said mapping (Motoyama Appendix A-D,

Abstract, column 3 lines 27-29, column 6 lines 30-32; compare with claim 25 "*A computer program....causing a*

computer system to:").

- Motoyama does not specifically teach identifying patterns common within documents. However,

Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample documents

(Takasawa page 9, near bottom). Takasawa parses documents, and compares various elements to elements and

attributes in said structure list (i.e. appearance frequency), resulting in a listed pattern of structured elements in

the documents, precipitating generation of a DTD based upon said list (Takasawa page 9 near bottom, to page

10 at top, also pages 11-12, and page 16 at bottom, Figures 8-11; compare with claim 25 "*identify patterns*

common to the first and second source documents;", "*using the identified common patterns*" , and "*....based*

*upon the identified common patterns... *"). It would have been obvious to one of ordinary skill in the art at the

time of the invention to apply Takasawa's pattern identification to Motoyama, providing Motoyama the benefit

of simplifying the exchange of similar documents for reuse, by taking into account common patterns in the

mapping process (Takasawa page 1 at middle).

- mapping elements and sub-elements from one source document to equivalent elements and sub-

elements in the second document, the mapping of SGML elements to HTML elements are used by Motoyama to

produce documents accordingly (Motoyama column 6 lines 1-10, Apendix B, D, Figures 3A- 3B; compare with

claim 25 "*map elements and sub-elements....of the second source document.*").

- Motoyama teaches mapping elements in a first document, to another element in a second document

(Motoyama column 6 lines 29-38, Figures 1A – 1D). It is noted that Motoyama teaches an SGML document

with its corresponding DTD (Figure 1C and 1A, respectively). A mapping is created (Figure 1B), resulting in

conversion to an equivalent HTML document (Figure 1D). Motoyama's conversion entails an SGML document start tag specifically mapped to its (differently named) HTML equivalent (Motoyama column 8 lines 14-18, 40-42, SGML tag <t> maps to HTML tag <html>, etc.) (see also Motoyama column 7 lines 5-11; compare with claim 25 "...*to map a first element in the first source document to a second element in the second source document*", and "*the first element and the second element having different element names.*").

In regard to dependent claim 26, Motoyama teaches mappings within Appendices A-D, said appendices comprising various tag replacement (Motoyama column 29 line 45, to column 31 line 48; compare with claim 26).

In regard to dependent claim 27, Motoyama teaches transformation of an SGML document into an HTML document, said transformation incorporating analyzation of their respective DTDs, and utilizing the mappings of Appendices A-D (Motoyama Abstract, column 6 lines 1-4, 30-32, Appendices A-D, Figures 3A-3B; compare with claim 27).

In regard to independent claim 28, Motoyama teaches:

- a storage device (Motoyama Figure 19 item 1236; compare with claim 28 "*a storage device*").

- converting a format of a first source document (SGML) into a format of another similarly structured document (HTML). Motoyama teaches mapping from SGML to HTML utilizing mapping tables of Appendices A-D, said mapping utilizing various heuristics in order to perform said mapping (Motoyama Appendix A-D, Abstract, column 3 lines 27-29, column 6 lines 30-32; compare with claim 28 "*A computer system comprising*", and "*for storing a source document.....the set of source documents;*").

- Motoyama does not specifically teach identifying patterns common within documents. However, Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample documents (Takasawa page 9, near bottom). Takasawa parses documents, and compares various elements to elements and

attributes in said structure list (i.e. appearance frequency), resulting in a listed pattern of structured elements in the documents, precipitating generation of a DTD based upon said list (Takasawa page 9 near bottom, to page 10 at top, also pages 11-12, and page 16 at bottom, Figures 8-11; compare with claim 28 *"identify patterns common to the first and second source documents;"*, and *"....based upon the identified common patterns... "*). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa's pattern identification to Motoyama, providing Motoyama the benefit of simplifying the exchange of similar documents for reuse, by taking into account common patterns in the mapping process (Takasawa page 1, at middle).

- mapping elements and sub-elements from one source document to equivalent elements and sub-elements in the second document, the mapping of SGML elements to HTML elements are used by Motoyama to produce documents accordingly (Motoyama column 6 lines 1-10, Appendix B, D, Figures 3A- 3B; compare with claim 28 *"map elements and sub-elements....of the set of source documents."*).

- Motoyama teaches mapping elements in a first document, to another element in a second document (Motoyama column 6 lines 29-38, Figures 1A – 1D). It is noted that Motoyama teaches an SGML document with its corresponding DTD (Figure 1C and 1A, respectively). A mapping is created (Figure 1B), resulting in conversion to an equivalent HTML document (Figure 1D). Motoyama's conversion entails an SGML document start tag specifically mapped to its (differently named) HTML equivalent (Motoyama column 8 lines 14-18, 40-42, SGML tag <t> maps to HTML tag <html>, etc.) (see also Motoyama column 7 lines 5-11; compare with claim 28 *"...including mapping a first element in the first source document to a second element in the second source document"*, and *"the first element and the second element having different element names."*).

In regard to dependent claims 29-30, 32-33, claims 29-30, 32-33 reflect the computer program product comprising computer readable instructions used for performing the methods as claimed in claims 17-18, 20-21, respectively, and are rejected along the same rationale.

In regard to claims 34-36, claims 34-36 reflect the computer program product comprising computer readable instructions used for performing the methods as claimed in claims 22-24, respectively, and are rejected along the same rationale.

In regard to dependent claims 37-40, Motoyama does not specifically teach identification without user intervention. However, Takasawa teaches automatically generating a DTD subsequent to computer analysis of input documents (Takasawa page 8 – bottom paragraph). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa to Motoyama, providing Motoyama the benefit of automation to free up manual human resources.

Response to Arguments

6.   Applicant's arguments filed 12/5/2003 have been fully and carefully considered but they are not persuasive.

It is respectfully noted that applicant's amendment regarding *"the first element and the second element having different element names"* in the independent claims significantly changes the scope of the claimed invention when interpreted as a whole.

The examiner currently relies on Takasawa to teach pattern matching, and the examiner has now determined that Motoyama teaches mapping, as claimed. Motoyama teaches mapping elements in a first document, to another element in a second document (see especially Motoyama Figures 1A – 1D). It is noted that Motoyama teaches an SGML document with its corresponding DTD (Figure 1C and 1A, respectively). A mapping is created (Figure 1B), resulting in conversion to an equivalent HTML document (Figure 1D). Motoyama's conversion entails an SGML document start tag specifically mapped to its (differently named) HTML equivalent (i.e. the SGML tag <t> maps to HTML tag <html>, etc.).

Takasawa parses sample documents, and compares various elements to elements in said structure list

(i.e. appearance frequency of common tags is a pattern), resulting in a listed pattern of structured elements in

the documents. It is noted that a single final DTD can be created based upon analysis of a plurality of input

documents. Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample

documents. Takasawa parses documents, and compares various elements to elements and attributes in said

structure list (i.e. appearance frequency), resulting in a listed pattern of structured elements in the documents,

precipitating generation of a DTD based upon said list. Since Motoyama takes into account a document's DTD

during the conversion process, Takasawa's pattern matching is applied to Motoyama's conversion.

Conclusion

7.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth

in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the

mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this

final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory

period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no

event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this

final action.

8.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to William Bashore whose telephone number is (703) 308-5807. The examiner can

normally be reached on Monday through Friday from 11:30 AM to 8:00 PM EST.

         If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Joseph Feild, can be reached on (703) 305-9792.

         Any inquiry of a general nature or relating to the status of this application should be directed to the

Group receptionist whose telephone number is (703) 305-3900.

9.   **Any response to this action should be mailed to:**

> Commissioner of Patents and Trademarks
> Washington, D.C. 20231

or faxed to:

> **(703-872-9306)** (for formal/after-final communications intended for entry)

**Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Fourth Floor (Receptionist).**

William L. Bashore   SANJIV SHAH
Patent Examiner, AU 2176   PRIMARY EXAMINER
February 20, 2004